

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated April 17, 2007, has been received and its contents carefully reviewed.

Claims 8-14 are rejected by the Examiner. With this response, claims 8 and 9 have been amended and claims 10 and 14 are cancelled without prejudice or disclaimer. No new matter has been added. Accordingly, claims 8-9 and 10-13 are currently pending, of which claims 1-7 are withdrawn as the result of an earlier restriction requirement. Reexamination and reconsideration of the pending claims is respectfully requested.

In the Office Action, claims 8-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2001/0013920 to Hashimoto et al. (hereinafter "Hashimoto '920") in view of Applicant's Related Art (hereinafter "ARA") and Japanese Patent Publication No. 64-059823 to Kawabe et al (hereinafter "Kawabe). Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto '920 in view of ARA and Kawabe, and further in view of U.S. Patent Publication No. 2003/0083203 to Hashimoto et al. (hereinafter "Hashimoto '203").

The rejection of claims 8-12 and 14 under 35 U.S.C. 103(a) as being unpatentable over Hashimoto '920 in view of ARA and Kawabe is respectfully traversed and reconsideration is requested. Claim 8 is allowable at least in that this claim recites a combination of elements, including, for example, "the range between the first flow amount and the second flow amount being divided into predetermined parts" and "determining a residual quantity of the dispensing material remaining in the syringe by comparing the third flow amount of gas with the divided parts of the range of the first flow amount and the second flow amount of the gas". The cited references do not teach or suggest at least these features of the claimed invention.

In rejecting claim 8, the Examiner acknowledges that Hashimoto '920 "does not teach detecting a first flow amount of gas and determining a second flow amount of gas based upon the first flow amount of gas and the volume of the syringe." See Office Action, lines 13-15 page 3.

The Examiner cites Kawabe as allegedly teaching "a method of accurately detecting the residual material 13 in a syringe 11. A pressure gauge is installed in the syringe to detect the

pressure of the head space. The residual amount can be detected by measuring the time required to reach a predetermined pressure when feeding gas into the syringe.” See Office Action, lines 22-25 page 3. As motivation for curing the deficiency of Hashimoto ‘920 with ARA and Kawabe, the Examiner states, “It would have been obvious to one having ordinary skill in the art at the time of the invention to have used the residual-detecting technique of Kawabe in the process of forming a sealant of Hashimoto ‘920 because Kawabe teaches that such a residual-detecting method is operable for use in syringes.”

Applicants respectfully disagree that Kawabe cures the deficiency of Hashimoto ‘920, because Kawabe fails to teach “determining a residual quantity of the dispensing material remaining in the syringe by comparing the third flow amount of gas with the divided parts of the range of the first flow amount and the second flow amount of the gas”. As the Examiner states in rejection, Kawabe merely discloses: “The residual amount can be detected by measuring the time required to reach a predetermined pressure when feeding gas into the syringe.” That is, in Kawabe the residual amount can be detected by counting the time that this pressure is reached in the predetermined pressure. On the contrary, in the claimed invention the residual amount can be detected by matching the flow amount of the gas to the divided parts of the two predetermined flow amounts. Thus, Kawabe fails to teach at least teach “determining a residual quantity of the dispensing material remaining in the syringe by comparing the third flow amount of gas with the divided parts of the range of the first flow amount and the second flow amount of the gas”. Accordingly, Applicants respectfully submit that claim 8 is allowable over the cited references.

Applicants respectfully traverse the rejection of claims 9 and 11-12 and reconsideration is respectfully requested. Claims 9 and 11-12 are allowable at least by virtue of the fact that they depend from claim 8, which is allowable.

The rejection of claim 13 under 35 U.S.C. 103(a) as being unpatentable over Hashimoto ‘920 in view of ARA and Kawabe, and further in view of Hashimoto ‘203 is respectfully traversed and reconsideration is requested. Claim 13 is allowable at least by virtue of the fact that they depend from claim 8, which is allowable.

Applicants believe the above amendments and remarks place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at 202-496.7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

Respectfully submitted,

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By



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